

## ABSTRACT

A system adjusts audio levels so as to maintain a constant perceived audio level at a user's location. The system includes a sensor (110) and an audio device (120). The sensor (110) receives a first audio signal, receives at least one data packet (1000) comprising a second audio signal, determines whether a difference between an average volume level of the first audio signal and the second audio signal exceeds a threshold value, generates a response data packet (1200) including a volume adjustment command when the difference between the average volume level of the first audio signal and the second audio signal exceeds the threshold value, and transmits the response data packet (1200). An audio device (120) transmits the first audio signal, transmits the at least one data packet (1000) to the sensor (110), receives the response data packet (1200), and adjusts an audio level based on the response data packet (1200).